

Department of Transportation

Federal Aviation Administration

Infrastructure Engineering Center - Atlanta

1701 Columbia Avenue

College Park, GA 30337



FAA-SO-2347

Specification For

“INSTALLATION OF A GABLE ROOF”

on the Tallahassee RCAG Equipment Building (TLH)

Tallahassee, Florida

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Submitted By:

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Divisions 2 to 5 and 8 to 16 are not applicable

DIVISION 1 - GENERAL REQUIREMENTS

1-1 SCOPE OF WORK

This specification along with project drawing and applicable codes cover the requirements of the Federal Aviation Administration (FAA) for installing a new gable roof on the RCAG building at Tallahassee, Florida.

The project contains, but is not limited to, the following work items:

- 1) Remove roof edge flashing. .
- 2) Remove approximately 30" wide strip of roofing materials at roof perimeter. Roofing has **"Asbestos Containing Material"** see Section 1-17.
- 3) Extend existing plumbing vent stack through new roof.
- 4) Install wood framing gable roof over the existing flat roof.
- 5) Install plywood sheathing for roof and endwalls.
- 6) Install felt underlayment, ice shield, shingles, endwall siding, flashing, vents, gutters and downspouts.
- 7) Dispose of all removed materials.

1-2 PRE-CONSTRUCTION MEETING

The contractor shall attend a pre-construction conference. The contractor shall abide by all requirements placed on him at the conference regarding safety practices, maintenance of security (locking gates, etc.).

1-3 COMPLIANCE WITH CODES

The contractor shall comply with local and other codes, standards adopted by the contract documents. Where the requirements of the specifications and drawings exceed those of local and adopted codes, the contractor shall comply with the requirements of the specifications and drawings.

1-4 RESTORATION

Any damage to existing utilities, structures, fences, ground surfaces (tire ruts) etc., shall be repaired to the satisfaction of the Resident Engineer at the contractor's expense.

1-5 PERMITS

The contractor shall be responsible for obtaining all permits required to complete this project, at no additional cost to the FAA.

1-6 COORDINATION

All coordination between the Contractor and the FAA shall be through the FAA Resident Engineer. Coordination with the Resident Engineer will be necessary throughout the work process.

1-7 APPLICABLE DOCUMENTS

The following drawings of the issue specified form a part to this specification and are applicable to the extent specified herein. If any conflict exists between drawings and the specifications, the specifications shall govern.

<u>DRAWING</u>	<u>REVISION</u>	<u>TITLE</u>
TLH-D-908709-A001		RCAG Gable Roof Installation Roof Framing Plan, Sections, & Details
TLH-D-908709-C001		RCAG Gable Roof Installation Plot Layout (Reference Drawing Only)

1-8 CONTRACTOR FURNISHED MATERIALS

The contractor shall furnish all materials, equipment, and labor to complete the project. The contractor shall make himself aware of all materials that he will be required to furnish under the contract. He shall identify items that have a long lead time from a manufacturer or distributor, and shall order these items as early as possible after the contract award. The use of brand names products in this specification does not constitute a requirement that they are the only materials that meet the specifications in this contract. They are used as an illustration of known acceptable sources or products. The contractor can use products that are identical or equal to the brand name product or known acceptable source in meeting the salient characteristics. Each product that a contractor wishes to use that is not a known acceptable source, must be approved before use, by the Contracting Officer or the Contracting Officer's designee. To gain approval, the contractor must submit documents and/or samples that will demonstrate that that product clearly will meet the Government's minimum needs.

1-9 STORAGE OF MATERIALS

Storage of reasonable quantities of materials, supplies, and tools on-site is permissible, providing the Resident Engineer authorizes the location. The FAA is not responsible for the security of Contractor owned materials, supplies, and tools.

1-10 CLEAN-UP

The contractor shall keep the working area clean. All rubbish and waste resulting from the execution of the work shall be removed at the end of each day.

1-11 SANITARY FACILITIES

Sanitary facilities are not available at the site. The contractor shall provide temporary toilet facilities as required for his workmen. Temporary toilet facilities shall be of the type approved by the local governing body. The location of the toilet facilities shall be as directed by the Resident Engineer.

1-12 SITE VISIT

All bidders are encouraged to visit the site prior to bidding to familiarize themselves with existing site conditions. Failure to do so will be unacceptable justification for additional

charges due to unknown site conditions. Contact Tallahassee SSC Manager at (850) 942-9697 to arrange for an appointment to visit the work site.

1-13 WORKING HOURS

Work shall be performed Mondays through Fridays between hours of **7:30** a.m. and **4:30** p.m. excluding government holidays.

1-14 WORKMANSHIP

All work shall be accomplished by experienced workers in accordance with the highest standards of the various work trades involved.

1-15 SAFETY

The contractor shall be responsible for safety on the work site. It is responsibility of the contractor to eliminate hazards that may result in tripping, electrical shock, fire, falling objects, environmental hazards, vehicular accidents, etc. The contractor shall comply with all safety regulations required by **OSHA**. The contractor shall have **two 15 lb. Class ABC** fire extinguishers at the work area through the progress of welding, metal cutting, or any other process involving a spark or fire hazard. The contractor shall furnish and install barricades, obstruction markers, and warning signs as required and instructed by the Resident Engineer.

1-16 ASBESTOS FREE CERTIFICATION

The Contractor shall provide to the Contracting Officer (C.O.) a signed statement stating that to the best of his/her knowledge, no asbestos-containing building materials were used during the construction.

If the FAA suspects the presence of asbestos, the FAA will sample the suspect material to verify that no asbestos-containing material was utilized. This testing shall be performed at the expense of the FAA. If asbestos-containing material is subsequently found during the sampling of the building materials, the Contractor shall remove and replace the product or material at his/her expense. In addition, the Contractor shall incur the costs of the original testing and/or any re-testing that may be necessary.

The Contractor shall submit to the C.O. Material Safety Data Sheets (**MSDS**), prior to construction, for all materials and/or products to be utilized during the course of the project accomplishment. During the course of the project, both the Resident Engineer and the Contractor shall routinely check products utilized on-site to ensure only products which have had MSDS submitted are utilized. Copies of all **MSDS** shall be turned over to the local FAA office for their records.

If the Contractor does not submit the required information described above, the FAA shall have a complete building survey performed by a qualified testing firm prior to acceptance. The cost of the survey and any subsequent removal/replacement of any asbestos-containing material shall be deducted from the Contractor's payment.

1-17 REMOVAL OF ASBESTOS CONTAINING ROOFING MATERIAL

Lab test indicates that existing built-up roof contains 2% asbestos in the roofing sample.

Asbestos roofing removal is an OSHA Class 2 work and specific work practices are spelled out in 29 CFR 1926.1101. Some, but not all of the requirements are as follows:

- Remove built-up roofing in an intact state to the extent feasible.
- Do not use a rotary blade cutter. May use spud, spade, flat-blade or slicing tools.
- Wet methods must be used.
- Do not drop the roofing off the edge of the building.
- Use practices that eliminate dust.
- Immediate clean-up of waste and debris is required.
- Competent person must supervise work. Provide a trained Competent person on site and worker training as required by OSHA 1926.1101. Follow all EPA, OSHA, and Ohio Department of Health Regulations.
- Worker training is 8 hours.
- Ohio Environmental Protection Agency (OAC 3745-20) and Federal Register (40 CFR 61) notification, emission control, and disposal requirements for asbestos must be followed.
- Contractor shall submit an Asbestos Abatement Plan two weeks prior to the pre-construction meeting. The plan shall clearly describe the details of removing, packing, storing, transporting, and disposing of the Asbestos Containing Materials.

DIVISION 6 - WOOD

6-1 GENERAL

6-1.1 Description

The contractor shall provide all materials, equipment, qualified personnel, and services required to construct structural framing, deck, and wall sheathing for new gable roof. Extent of work is as described in section 1-1 and shown on the contract drawings.

6-1.2 Submittals

Submit Shop Drawings showing framing connection details, fasteners, connectors, and dimensions. Submit manufacturer specification and allowable loads, if applicable, for any "approved equal" product such as seismic & hurricane ties.

6-1.3 Product Delivery, Storage, and Handling

- A) Protect lumber and other products from dampness both during and after delivery at site.
- B) Pile lumber in stacks in such manner as to provide air circulation around surfaces of each piece.
- C) Stack plywood and other board products so as to prevent warping.
- D) Locate stacks on well drained areas, supported at least 6 inches above grade and cover with well ventilated sheds having firmly constructed over hanging roof with sufficient end wall to protect lumber from driving rain.

6-1.4 Applicable Publications

Publications listed below form a part of this specification to extent referenced:

- A) American Forest & Paper Association (AF & PA) – American Wood Council (AWC):
"National Design Specifications (NDS) for Wood Construction."
"WCD No. 1 - Manual for wood Frame Construction"- Recommended Nailing Schedule.
- B) American Plywood Association (APA):
"Design/Construction guide – Residential & Commercial."
- C) U.S. Department of Commerce Product Standard (PS):
PS-1 Construction and Industrial Plywood
PS-20 American Softwood Lumber Standard

6-2 MATERIALS

- A) Sizes: Drawings indicate *nominal* sizes of lumber & sheathing. Sizes shall conform to PS-20 & PS-1.
- B) Moisture Content: 19% or less for lumber and sheathing.

- C) Fire Retardant: Lumber and sheathing shall have a certified fire retardant treatment.

6-2.1 Structural Lumber

Provide **grade No. 1** of Southern pine, Douglas fir-larch, or approved equal. The extreme fiber stress in bending (F_b) shall be **1,000 psi** minimum. Each piece of lumber shall bear grade mark, stamp, or other identification marks.

6-2.2 Roof Deck & Wall Sheathing

- A) Veneer Grade: C-D INT-APA with exterior glue (Commonly called CDX)
- B) Exposure Durability Classification: APA-Exterior
- C) Span Rating: APA Rated Sheathing **24/0** or better.

6-2.3 Metal Ties

Provide "Simpson", or approved equal, seismic & hurricane ties for all rafters as shown on the contract drawing.

6-3 INSTALLATION

6-3.1 Safety

The contractor shall provide adequate temporary bracing and take care not to overload any part of the structure during erection.

6-3.2 Workmanship

All carpentry work on this project shall be governed by the applicable requirements of the NDS except otherwise specified herein. Securely attach carpentry work to substrate by anchoring and fastening as shown on the contract drawings and as required by recognized standards.

6-3.3 Installation of Framing Lumber

Closely fit framing lumber and other rough carpentry, set accurately to the required lines and levels, and secure in place in a rigid and substantial manner. Do not splice framing members between bearing points. Set rafters with their crown edge up. Comply with "Recommended Nailing Schedule" of "Manual for Wood Frame Construction" and "National Design Specifications for Wood Construction" published by the AF & PA. Provide as necessary for the proper completion of the work all framing members not indicated or specified.

6-3.4 Installation of roof sheathing

Install with the grain of the outer plies or long dimension at right angles to supports. Stagger end joints and locate over the centerlines of supports. Allow **1/8 inch** spacing at panel ends and **1/4 inch** at panel edges. Nail panels with **8-penny** common nails or screw-type nails spaced **6 inches** (maximum) on centers at supported edges and **12 inches** (maximum) on centers at secondary bearing.

DIVISION 7 - MOISTURE PROTECTION

7-1 ROOFING

7-1.1 General

A) Description:

The contractor shall provide all materials, equipment, qualified personnel, and services required to install complete roofing system. Extent of work is as described in section 1-1 and shown on the contract drawing.

B) Submittals:

Submit technical product data and installation instructions & recommendations from roofing manufacturer.

C) Delivery, Storage, and Handling:

1. Deliver materials in manufacturer's unopened bundles or containers with the manufacturer's brand and name clearly marked thereon.
2. Shingle bundle wrapping shall bear the label of Underwriters Laboratories, Inc.
3. Store shingles in accordance with manufacturer's printed instructions. Store roll goods on end in an upright position.
4. Keep materials dry, completely covered, and protected from the weather.

D) Warranty:

Provide shingles manufacturer's warranty on installed work, agreeing to pay for repair or replacement of defective shingles as necessary to eliminate leaks. Period of warranty is 20 years from completion.

7-1.2 Materials

A) Shingles:

Shingles shall be UL Class "A", 225 lbs./square, mineral surfaced, self-sealing, 3-tab asphalt fiberglass strip shingles complying with ASTM D 3018. Provide shingles bearing UL Class "A" external fire exposure label and UL "Wind Resistant" label. Color shall be white.

B) Roofing Felt:

Asphalt saturated roofing felt shall be No. 15, unperforated organic felt, complying with ASTM D 226 Type I, 36" wide, approximate weight 18 lbs./square.

C) Ice Shield:

Provide a 36" wide ice and water shield, as manufactured by GAF (800-223-1948) or approved equal, at roof eaves.

D) Roofing Nails:

Nails shall be aluminum or hot-dip galvanized **11 gage**, sharp pointed, conventional roofing nails with barbed shanks, minimum **3/8"** diameter head, and of sufficient length to penetrate through plywood sheathing. Do not use staples.

E) Fascia:

Fascia shall be minimum **0.04"** aluminum sheet.

F) Metal drip edge:

Metal drip edge shall be minimum **0.024"** aluminum sheet, brake-formed to provide **4"** roof deck flange, and **1 1/2"** fascia flange with **3/8"** drip at lower edge.

G) Flashing:

Flashing shall be minimum **0.032"** aluminum sheet except flashing for roof penetrations shall be **0.04" thick**. Job-cut to sizes and configuration required.

H) Gutters & Downspouts:

Gutters & downspouts shall be formed in sections not less than **ten (10) feet** in length, complete with end pieces, outlet tubes, and special pieces that may be required. Join sections with riveted and soldered or sealed joints. Furnish manufacturer's standard aluminum gutter supports spaced at maximum **30" o.c.** Furnish at least **two (2)** wall bracket supports for each downspout spaced at **5 feet** maximum. Provide aluminum, wire ball strainers at each gutter outlet. Gutters shall be minimum **0.04"** aluminum sheet. Downspouts shall be minimum **0.032"** aluminum sheet.

I) Roof Vents:

1. Ridge Vents: Factory manufactured, one piece construction, adjustable to roof slope, self flashing, built-in weather baffle designed to allow ventilation and exclude water, and insect.

Provide "Ridge Master" as manufactured by Mid-America Building Products (**800-521-8486**) or approved equal.

2. Gable Vents: Factory manufactured, adjustable in shape to roof slope, louvers designed to allow ventilation and exclude water, and built-in insect protection.

Provide "Gable Master" as manufactured by Mid-America Building Products (**800-521-8486**) or approved equal.

7-1.3 Installation

A) Underlayment:

Apply one layer of felt horizontally over the entire roof surface, lapping succeeding courses **2"** minimum and fastening with sufficient nails to hold in place until shingle application.

B) Ice protection:

Install continuous strip of **36" wide** ice protection. Comply with manufacture's installation recommendations.

C) Shingles:

Comply with instructions and recommendations of the shingle manufacturer. Hand nail, do not staple.

D) Gutters, Downspouts, and Roofing Accessories:

Comply with installation instructions and recommendations of each manufacturer. Use only aluminum or hot dipped galvanized steel nails.

7-2 SIDING

7-2.1 General

A) Description:

The contractor shall provide all materials, equipment, qualified personnel, and services required to install complete siding system. New siding shall match color and pattern of the existing siding. Extent of work is as described in section 1-1 and shown on the contract drawings.

B) Submittals:

Submit technical product data and installation instructions & recommendations from siding manufacturer.

C) Delivery, Storage, and Handling:

1. Siding panels to be packed two squares per box. Each original, unopened box to be clearly marked with manufacturer's name, style, color, and lot number.
2. Siding and accessories are to be stored in an area that is clean, flat, dry, and out of direct sunlight. Cover only with a clear plastic.
3. Handle material in a manner to prevent damage. Do not allow siding cartons to crease.

D) Warranty:

Provide siding manufacturer's warranty on installed work, agreeing to pay for repair or replacement of defective siding which fails through corrosion or damage to finish caused by manufacturing defect. Period of warranty is 10 years from completion.

E) Publications:

Publications listed below form a part of this specification to the extent referenced.

1. American Society for Testing Materials ASTM D 3679:
Standard Specification for Rigid Polyvinyl Chloride (PVC) Siding.
2. Building Officials and Code Administrators International, IC (BOCA)
Research
Report No. 86-36.
3. American Society for Testing Materials ASTM D 226:
Standard Specification for Asphalt-Saturated Organic Felt.

7-2.2 Materials

A) Siding:

Solid vinyl siding shall consist of extruded polyvinyl chloride (PVC) compound as defined in **ASTM D 3679**. Siding shall be **8 inch** (single) horizontal siding and shall be **white** in color. Solid PVC corner posts, starter strips, drip caps, and trim channels shall match vinyl siding.

B) Felt Underlayment:

ASTM D 226, Type I-Commonly called **No. 15** asphalt felt.

C) Fasteners:

Use aluminum or hot -dipped galvanized siding nails with a minimum head diameter of **3/8"**.

7-2.3 Installation

Comply with the instructions and recommendations of the siding manufacturer, except to the extent more stringent requirements are indicated. Apply one layer of felt underlayment over entire surface, lapping succeeding courses **2" minimum** and fastening with sufficient nails to hold in place until siding application.